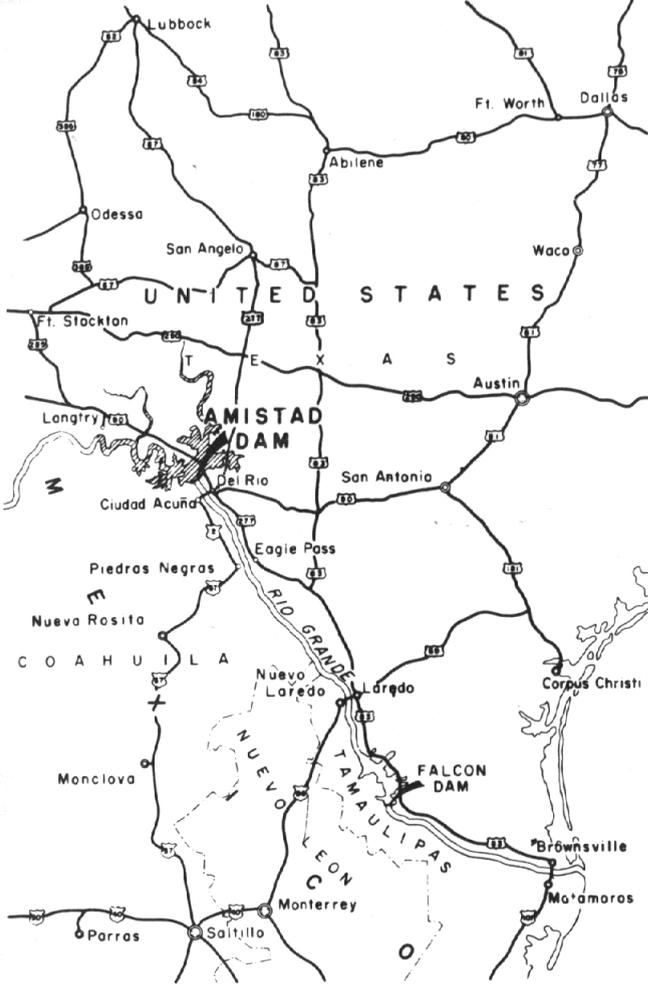


AMISTAD DAM AND POWER PLANTS



HIGHWAY DISTANCES TO THE DAM FROM POINTS IN:

UNITED STATES

DEL RIO -----	13 MILES	(21 KM)
SAN ANTONIO ---	167 MILES	(269 KM)
AUSTIN -----	245 MILES	(394 KM)
SAN ANGELO ---	170 MILES	(274 KM)
DALLAS -----	441 MILES	(710 KM)

MEXICO

CIUDAD ACUÑA	14 MILES	(23 KM)
PIEDRAS NEGRAS	68 MILES	(109 KM)
NUEVO LAREDO	183 MILES	(295 KM)
MONTERREY	398 MILES	(641 KM)
MATAMOROS	413 MILES	(665 KM)



Under Supervision of the
INTERNATIONAL BOUNDARY
AND WATER COMMISSION
UNITED STATES & MEXICO

THE INTERNATIONAL AMISTAD DAM AND RESERVOIR UNITED STATES AND MEXICO

DAM

Location - on the Rio Grande 12 river miles (19 km) northwest of Del Rio, Texas, 574 river miles (924 km) above the mouth of the Rio Grande, and 1 mi. (1.6 km) below confluence of the Devils River.

Purpose - Flood control, water conservation, hydroelectric power, and recreation.

Constructed by U.S. & Mexico pursuant to Water Treaty of 1944. Dam constructed 1963-1969. U.S. Power Plant constructed 1980-1983. Mexico's Power Plant constructed 1981-1987.

Dedicated by President Nixon of U.S. and President Diaz Ordaz of Mexico - September 8, 1969.

Type - Concrete gravity section in river channel with flanking earth embankments.

Length -
 U.S. 9,585 ft. (2,921 m)
 Mexico 22,437 ft. (6,839 m)
 Total 32,022 ft. (9,760 m)

Height -
 Roadway is 254 ft. (77.4 m) above riverbed and 1,152.3 ft. (351.2 m) above mean sea level.

Construction Features of Amistad Dam:

Rock excav.	3,100,000 cu. yds.	(2,370,000 m ³)
Embankment	13,500,000 cu. yds.	(10,320,000 m ³)
Riprap	1,755,000 cu. yds.	(1,340,000 m ³)
Concrete	1,800,000 cu. yds.	(1,375,000 m ³)
Reinforcing steel	6,000 tons	(5,400 mt)
Structural steel	6,500 tons	(5,900 mt)

Cost - \$72,318,000 - U.S. Share of Dam
 - \$30,894,000 - U.S. Powerplant

Relocations:

Southern Pacific Railroad - 14.3 mi. (23 km) of main line track and Devils River R.R. Bridge. Highways - 19 mi. (31 km) of U.S. Hwys. 90 and 277 and Devils River and San Pedro Canyon Bridges.

RESERVOIR

	Capacity	
	acre-feet	(m ³ x 1000)
Superstorage	407,000	(502,000)
Flood Control	1,744,000	(2,151,200)
Silt & Conservation	3,384,000	(4,174,000)
	<u>5,535,000</u>	<u>(6,827,200)</u>

	Elevation (m.s.l.)		Area	
	ft.	m.	acres (hectares)	
Top of Super-storage pool	1145.1	(349.025)	89,000 (36,000)	
Top of normal flood control pool	1140.4	(347.59)	84,000 (34,000)	
Top of Conservation pool	1117.0	(340.46)	65,000 (26,300)	
Lowest water outlet	930.0	(283.46)	700 (280)	

SPILLWAY

Discharge capacity 1,507,000 cfs (42,670 m³/s)
 Ogee type crest with 16 tainter gates
 50 ft. x 54 ft. (15.2 m x 16.5 m)
 Crest elevation 1086.4 ft. (331.13 m)
 Stilling basin-horizontal apron, hydraulic jump type,
 950 ft. (289.6 m) wide, 226.75 ft. (69.113 m) long

PENSTOCKS

U.S. - 5 Penstocks - 14.5 ft. (4.42 m) dia. with sill elev. 930.0 ft (283.36 m)
 Mex. - 4 Penstocks - 15.75 ft. (4.80 m) dia. with sill elev. 965.22 ft. (294.20 m)

LEGEND

ft.	- feet
cfs	- cubic feet per second
r.p.m.	- revolutions per minute
m.s.l.	- mean sea level
lbs.	- pounds
KW	- Kilowatts
Hp	- Horsepower
m	- meters
m ³	- cubic meters
m ³ /s	- cubic meters per second
km	- Kilometers

GENERAL RULES AND REGULATIONS

For Public Use of Reservoir
by
United States Residents

1. Boating on the U.S. portion of reservoir is subject to applicable laws of the United States and the State of Texas as administered by the National Park Service and the Texas Parks and Wildlife Department.
2. Persons operating boats from the U.S. shore are not subject to special boating restrictions on the Mexican portion of reservoir unless they land on the Mexican shore, at which time they are subject to Mexican laws.
3. Residents of the United States, boating on the reservoir are not subject to U.S. Immigration or Customs inspection provided they do not land in Mexico or take aboard anything from Mexico.
4. Persons fishing and hunting on the U.S. portion of the reservoir are subject to applicable Federal and State Laws, and on the Mexican portion to the applicable laws of that country.
5. With the exception of the recreational areas under the jurisdiction of the National Park Service, all lands on the U.S. side above the top of the Flood Control Pool are privately owned.
6. For particulars with respect to Amistad Recreation Areas, contact National Park Service, United States Department of the Interior, Amistad Recreation Area, P.O. Box 420367, U.S. Highway 90 West, Del Rio, Texas 78842-0367.

U.S. POWER PLANT

Average Annual U.S. generation = 161,000,000 kilowatt hours

Design Head = 176 feet (53.6 m)

Max Net Operating Head 234 feet (71.3 m)

Min. Net Operating Head 115 feet* (35 m)

* Francis type high head turbine. Plant also equipped with a low head turbine with a design head of 150 feet (45.7 m) to operate to a minimum of 98 feet (29.9 m) head.

Normal river tailwater elevation = 900 feet (274.3m) m.s.l.

Normal flow through each turbine at rated load = 2,300 cfs (65 m³/s)

Turbine - Generator Shaft diameter = 25 inches (63.5 cm)

Turbine - Generator Speed 200 r.p.m.

Generator voltage = 13,800 volts

Transmission line voltage = 138,000 volts

Powerhouse 180 feet (54.9 m) long and 52 feet (15.9 m) wide

Powerhouse road and deck elevation = 930 feet (283.5 m) m.s.l.

Bridge Crane Capacity = 250,000 lbs. (113.4mt)

Two units: Generators 33,000 KW each
Turbines 42,300 Hp each

MEXICO POWER PLANT

Similar to U.S. Power Plant with equal generating capacity